

# APPENDIX C

## Summary of Air Monitoring Data

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**TABLE C-1**  
**2007 Effluent Airborne Radioactivity at Main Stack (ANSTACK)**

<i>Isotope<sup>a</sup></i>	<i>N</i>	<i>Total Activity Released<sup>b</sup> (Ci)</i>	<i>Average Concentration (μCi/mL)</i>	<i>Maximum Concentration (μCi/mL)</i>	<i>DCG<sup>c</sup> (μCi/mL)</i>	<i>Ratio of Concentration to DCG</i>
<b>Gross Alpha</b>	26	5.90±0.67E-07	7.95±0.91E-16	1.89E-15	--	--
<b>Gross Beta</b>	26	1.28±0.02E-05	1.73±0.03E-14	7.11E-14	--	--
<b>H-3</b>	26	2.07±0.04E-03	2.79±0.01E-12	1.60E-11	1E-07	<0.0001
<b>Co-60</b>	2	2.89±3.72E-08	3.90±5.02E-17	<6.45E-17	8E-11	<0.0001
<b>Sr-90</b>	2	2.25±0.16E-06	3.04±0.21E-15	4.02E-15	9E-12	0.0003
<b>I-129</b>	2	2.72±0.21E-05	3.66±0.28E-14	3.75E-14	7E-11	0.0005
<b>Cs-137</b>	2	4.56±0.26E-06	6.14±0.35E-15	6.47E-15	4E-10	<0.0001
<b>Eu-154</b>	2	-0.03±1.23E-07	-0.04±1.65E-16	<2.40E-16	5E-11	<0.0001
<b>U-232<sup>d</sup></b>	2	4.77±4.99E-09	6.42±6.73E-18	9.65E-18	2E-14	<0.0003
<b>U-233/234<sup>d</sup></b>	2	2.54±0.74E-08	3.42±1.00E-17	3.93E-17	9E-14	0.0004
<b>U-235/236<sup>d</sup></b>	2	6.99±4.09E-09	9.42±5.51E-18	9.27E-18	1E-13	<0.0001
<b>U-238<sup>d</sup></b>	2	1.81±0.69E-08	2.43±0.93E-17	2.31E-17	1E-13	0.0002
<b>Pu-238</b>	2	5.00±1.23E-08	6.73±1.65E-17	6.20E-17	3E-14	0.0022
<b>Pu-239/240</b>	2	9.67±1.64E-08	1.30±0.22E-16	1.61E-16	2E-14	0.0065
<b>Am-241</b>	2	2.08±0.21E-07	2.80±0.29E-16	3.43E-16	2E-14	0.014
<b>Sum of Ratios</b>						<b>0.025</b>

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

<sup>a</sup> Half-lives are listed in Table UI-4.

<sup>b</sup> Total volume released at 50,000 cfm = 7.42E+14 mL/year

<sup>c</sup> Derived concentration guides (DCGs) are listed for reference only. They are applicable to average concentrations at the site boundary but not to stack concentrations, as might be inferred from their inclusion in this table.

<sup>d</sup> Total Uranium: 3.14±0.15E-02 g; average = 4.23E±0.21E-11 μg/mL

**TABLE C-2**  
**2007 Effluent Airborne Radioactivity at Vitrification System HVAC (ANVITSK)**

<i>Isotope</i>	<i>N</i>	<i>Total Activity Released (Ci)</i>	<i>Average Concentration (<math>\mu\text{Ci}/\text{mL}</math>)</i>	<i>Maximum Concentration (<math>\mu\text{Ci}/\text{mL}</math>)</i>	<i>DCG<sup>a</sup> (<math>\mu\text{Ci}/\text{mL}</math>)</i>
<b>Gross Alpha</b>	26	-0.65±1.48E-08	-1.76±3.99E-17	<3.20E-16	--
<b>Gross Beta</b>	26	1.36±4.30E-07	3.65±1.16E-16	2.92E-15	--
<b>Co-60</b>	2	-0.41±2.04E-08	1.09±5.49E-17	<9.72E-17	8E-11
<b>Sr-90</b>	2	1.33±2.31E-08	3.58±6.23E-17	<9.31E-17	9E-12
<b>I-129</b>	2	0.00±5.53E-08	0.00±1.49E-16	<2.08E-16	7E-11
<b>Cs-137</b>	2	0.09±2.19E-08	0.23±5.91E-17	<9.90E-17	4E-10
<b>Eu-154</b>	2	1.82±5.96E-08	0.49±1.61E-16	<2.88E-16	5E-11
<b>U-232<sup>b</sup></b>	2	0.90±1.70E-09	2.43±4.57E-18	<7.01E-18	2E-14
<b>U-233/234<sup>b</sup></b>	2	1.21±0.38E-08	3.26±1.01E-17	3.82E-17	9E-14
<b>U-235/236<sup>b</sup></b>	2	2.13±1.81E-09	5.75±4.88E-18	8.23E-18	1E-13
<b>U-238<sup>b</sup></b>	2	7.59±3.00E-09	2.05±0.81E-17	2.37E-17	1E-13
<b>Pu-238</b>	2	0.25±1.05E-09	0.68±2.83E-18	<4.40E-18	3E-14
<b>Pu-239/240</b>	2	3.77±9.87E-10	1.02±2.66E-18	<4.45E-18	2E-14
<b>Am-241</b>	2	1.44±1.45E-09	3.88±3.91E-18	<7.27E-18	2E-14

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

<sup>a</sup> Derived concentration guides (DCGs) are listed for reference only. They are applicable to average concentrations at the site boundary but not to stack concentrations, as might be inferred from their inclusion in this table.<sup>b</sup> Total Uranium: 1.84±0.06E-02 g; average = 4.96±0.15E-11  $\mu\text{g}/\text{mL}$ 

**TABLE C-3**  
**2007 Effluent Airborne Radioactivity at 01-14 Building (ANCSSTK)**

<i>Isotope</i>	<i>N</i>	<i>Total Activity Released (Ci)</i>	<i>Average Concentration (<math>\mu\text{Ci}/\text{mL}</math>)</i>	<i>Maximum Concentration (<math>\mu\text{Ci}/\text{mL}</math>)</i>	<i>DCG<sup>a</sup> (<math>\mu\text{Ci}/\text{mL}</math>)</i>
<b>Gross Alpha</b>	26	-1.01±0.53E-09	-7.03±3.69E-17	<2.60E-16	--
<b>Gross Beta</b>	26	-0.38±1.61E-08	-0.27±1.12E-16	1.67E-15	--
<b>Co-60</b>	2	3.89±4.90E-09	2.70±3.40E-17	<4.89E-17	8E-11
<b>Sr-90</b>	2	0.40±8.47E-09	0.28±5.88E-17	<9.26E-17	9E-12
<b>I-129</b>	2	4.40±3.57E-08	3.06±2.48E-16	<4.23E-16	7E-11
<b>Cs-137</b>	2	4.09±7.74E-09	2.84±5.38E-17	<7.68E-17	4E-10
<b>Eu-154</b>	2	-0.47±1.44E-08	-0.32±1.00E-16	<1.54E-16	5E-11
<b>U-232<sup>b</sup></b>	2	-0.19±5.71E-09	-0.13±3.97E-17	<7.77E-17	2E-14
<b>U-233/234<sup>b</sup></b>	2	6.03±2.93E-09	4.19±2.03E-17	5.25E-17	9E-14
<b>U-235/236<sup>b</sup></b>	2	2.53±1.87E-09	1.76±1.30E-17	1.06E-17	1E-13
<b>U-238<sup>b</sup></b>	2	6.53±2.88E-09	4.54±2.00E-17	7.16E-17	1E-13
<b>Pu-238</b>	2	-0.79±4.62E-10	-0.55±3.21E-18	<5.45E-18	3E-14
<b>Pu-239/240</b>	2	-0.71±6.11E-10	-0.50±4.24E-18	<5.97E-18	2E-14
<b>Am-241</b>	2	-6.21±9.74E-10	-4.31±6.76E-18	<1.09E-17	2E-14

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

<sup>a</sup> Derived concentration guides (DCGs) are listed for reference only. They are applicable to average concentrations at the site boundary but not to stack concentrations, as might be inferred from their inclusion in this table.<sup>b</sup> Total Uranium: 8.67±0.42E-03 g; average = 6.02±0.29E-11  $\mu\text{g}/\text{mL}$

**TABLE C-4**  
**2007 Effluent Airborne Radioactivity at Contact Size-Reduction Facility (ANCSRFK)**

<b>Ventilation Off; System Did Not Operate During CY 2007</b>
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**TABLE C-5**  
**2007 Effluent Airborne Radioactivity at Supernatant Treatment System (ANSTSTK)**

<i>Isotope</i>	<i>N</i>	<i>Total Activity Released (Ci)</i>	<i>Average Concentration (<math>\mu\text{Ci/mL}</math>)</i>	<i>Maximum Concentration (<math>\mu\text{Ci/mL}</math>)</i>	<i>DCG<sup>a</sup> (<math>\mu\text{Ci/mL}</math>)</i>
Gross Alpha	26	-2.99±2.88E-09	-4.48±4.31E-17	<3.09E-16	--
Gross Beta	26	-4.29±8.19E-09	-0.64±1.23E-16	<6.78E-16	--
H-3	26	2.97±0.60E-05	4.44±9.05E-13	1.76E-12	1E-07
Co-60	2	-1.10±3.84E-09	-1.64±5.75E-17	<8.74E-17	8E-11
Sr-90	2	-0.34±3.98E-09	-0.51±5.95E-17	<7.81E-17	9E-12
I-129	2	7.56±0.50E-06	1.13±0.08E-13	1.13E-13	7E-11
Cs-137	2	3.45±3.38E-09	5.17±5.06E-17	<7.59E-17	4E-10
Eu-154	2	0.28±1.93E-08	0.42±2.89E-16	<4.75E-16	5E-11
U-232 <sup>b</sup>	2	-0.01±1.00E-09	-0.02±1.50E-17	<2.47E-17	2E-14
U-233/234 <sup>b</sup>	2	2.36±0.76E-09	3.53±1.13E-17	4.00E-17	9E-14
U-235/236 <sup>b</sup>	2	3.49±3.32E-10	5.23±4.97E-18	<6.04E-18	1E-13
U-238 <sup>b</sup>	2	1.84±0.70E-09	2.76±1.05E-17	3.00E-17	1E-13
Pu-238	2	-1.62±2.54E-10	-2.42±3.80E-18	<5.02E-18	3E-14
Pu-239/240	2	-2.03±2.78E-10	-3.05±4.17E-18	<5.12E-18	2E-14
Am-241	2	7.68±4.29E-10	1.15±0.64E-18	1.87E-17	2E-14

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

<sup>a</sup> Derived concentration guides (DCGs) are listed for reference only. They are applicable to average concentrations at the site boundary but not to stack concentrations, as might be inferred from their inclusion in this table.

<sup>b</sup> Total Uranium: 3.59±0.15E-03 g; average = 5.37±2.21E-11  $\mu\text{g/mL}$

**TABLE C-6**  
**2007 Effluent Airborne Radioactivity at Container Sorting and Packaging Facility (ANCSPFK)**

<i>Isotope</i>	<i>N</i>	<i>Total Activity Released (Ci)</i>	<i>Average Concentration (<math>\mu\text{Ci}/\text{mL}</math>)</i>	<i>Maximum Concentration (<math>\mu\text{Ci}/\text{mL}</math>)</i>	<i>DCG<sup>a</sup> (<math>\mu\text{Ci}/\text{mL}</math>)</i>
<b>Gross Alpha</b>	26	-4.66±0.67E-09	-2.64±0.38E-16	<3.08E-16	--
<b>Gross Beta</b>	26	4.24±2.03E-09	2.40±1.15E-16	1.89E-15	--
<b>Co-60</b>	2	4.55±5.30E-10	2.57±3.00E-17	<4.72E-17	8E-11
<b>Sr-90</b>	2	9.27±9.21E-10	5.25±5.21E-17	<8.26E-17	9E-12
<b>I-129</b>	2	2.40±7.34E-08	1.36±0.42E-15	2.59E-15	7E-11
<b>Cs-137</b>	2	-0.34±6.08E-10	-0.19±3.44E-17	<6.01E-17	4E-10
<b>Eu-154</b>	2	0.15±1.47E-09	0.83±8.32E-17	<1.35E-16	5E-11
<b>U-232<sup>b</sup></b>	2	2.85±5.65E-11	1.61±3.19E-18	3.20E-18	2E-14
<b>U-233/234<sup>b</sup></b>	2	2.58±1.16E-10	1.46±0.66E-17	2.19E-17	9E-14
<b>U-235/236<sup>b</sup></b>	2	1.22±0.93E-10	6.92±5.28E-18	1.02E-17	1E-13
<b>U-238<sup>b</sup></b>	2	1.77±1.16E-10	1.00±0.66E-17	1.17E-17	1E-13
<b>Pu-238</b>	2	3.75±5.20E-11	2.12±2.94E-18	<4.31E-18	3E-14
<b>Pu-239/240</b>	2	2.96±6.17E-11	1.68±3.49E-18	<6.08E-18	2E-14
<b>Am-241</b>	2	4.35±9.60E-11	2.46±5.43E-18	<9.44E-18	2E-14

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

<sup>a</sup> Derived concentration guides (DCGs) are listed for reference only. They are applicable to average concentrations at the site boundary but not to stack concentrations, as might be inferred from their inclusion in this table.<sup>b</sup> Total Uranium: 8.87±0.39E-04 g; average = 5.02±0.22E-12  $\mu\text{g}/\text{mL}$ 

**TABLE C-7**  
**2007 Effluent Airborne Radioactivity at Outdoor Ventilation Enclosures/Portable Ventilation Units (OVEs/PVUs)**

<i>Isotope</i>	<i>N</i>	<i>Total Activity Released (Ci)</i>	<i>Average Concentration (<math>\mu\text{Ci}/\text{mL}</math>)</i>	<i>Maximum Concentration (<math>\mu\text{Ci}/\text{mL}</math>)</i>	<i>DCG<sup>a</sup> (<math>\mu\text{Ci}/\text{mL}</math>)</i>
<b>Gross Alpha</b>	54	-2.37±2.24E-09	-5.90±5.56E-17	<4.54E-16	--
<b>Gross Beta</b>	54	-7.51±6.49E-09	-1.87±1.61E-16	1.49E-15	--
<b>Co-60</b>	2	-0.07±2.32E-09	-0.18±5.76E-17	<7.91E-17	8E-11
<b>Sr-90</b>	2	0.17±2.10E-09	0.42±5.21E-17	<6.94E-17	9E-12
<b>Cs-137</b>	2	0.68±2.11E-09	1.68±5.23E-17	<7.21E-17	4E-10
<b>Eu-154</b>	2	-1.91±8.47E-09	0.48±2.10E-16	<2.92E-16	5E-11
<b>U-232<sup>b</sup></b>	2	2.25±1.32E-10	5.59±3.28E-18	6.94E-18	2E-14
<b>U-233/234<sup>b</sup></b>	2	9.51±2.92E-10	2.36±0.73E-17	2.50E-17	9E-14
<b>U-235/236<sup>b</sup></b>	2	2.81±1.73E-10	6.97±4.29E-18	7.69E-18	1E-13
<b>U-238<sup>b</sup></b>	2	1.01±0.31E-09	2.50±0.76E-17	2.25E-17	1E-13
<b>Pu-238</b>	2	-5.20±5.69E-11	-1.29±1.41E-18	<2.42E-18	3E-14
<b>Pu-239/240</b>	2	0.71±1.10E-10	1.77±2.73E-18	<4.18E-18	2E-14
<b>Am-241</b>	2	2.21±2.00E-10	5.48±4.97E-18	<6.37E-18	2E-14

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

<sup>a</sup> Derived concentration guides (DCGs) are listed for reference only. They are applicable to average concentrations at the site boundary but not to stack concentrations, as might be inferred from their inclusion in this table.<sup>b</sup> Total Uranium: 2.70±0.06E-03 g; average = 6.70±0.15E-11  $\mu\text{g}/\text{mL}$

**TABLE C-8**  
**2007 Effluent Airborne Radioactivity at Remote-Handled Waste Facility Stack (ANRHWFK)**

<i>Isotope</i>	<i>N</i>	<i>Total Activity Released (Ci)</i>	<i>Average Concentration (<math>\mu\text{Ci}/\text{mL}</math>)</i>	<i>Maximum Concentration (<math>\mu\text{Ci}/\text{mL}</math>)</i>	<i>DCG<sup>a</sup> (<math>\mu\text{Ci}/\text{mL}</math>)</i>
<b>Gross Alpha</b>	26	-1.54±0.75E-08	-1.30±0.63E-16	<3.13E-16	--
<b>Gross Beta</b>	26	-1.91±2.28E-08	-1.62±1.94E-16	6.79E-16	--
<b>Co-60</b>	2	0.33±1.15E-08	2.78±9.77E-17	<1.11E-16	8E-11
<b>Sr-90</b>	2	0.99±1.05E-08	8.37±8.91E-17	9.72E-17	9E-12
<b>I-129</b>	2	3.09±0.62E-07	2.63±5.29E-15	4.95E-15	7E-11
<b>Cs-137</b>	2	0.72±1.66E-08	0.61±1.41E-16	<1.75E-16	4E-10
<b>Eu-154</b>	2	0.44±3.40E-08	0.37±2.89E-16	<2.96E-16	5E-11
<b>U-232<sup>b</sup></b>	2	-0.10±1.21E-09	-0.09±1.03E-17	<9.87E-18	2E-14
<b>U-233/234<sup>b</sup></b>	2	4.04±1.94E-09	3.44±1.65E-17	2.70E-17	9E-14
<b>U-235/236<sup>b</sup></b>	2	1.76±1.26E-09	1.50±1.07E-17	<9.96E-18	1E-13
<b>U-238<sup>b</sup></b>	2	3.27±1.54E-09	2.78±1.31E-17	2.40E-17	1E-13
<b>Pu-238</b>	2	3.73±7.66E-10	3.17±6.514E-18	<7.37E-18	3E-14
<b>Pu-239/240</b>	2	7.01±9.04E-10	5.96±7.68E-18	<7.36E-18	2E-14
<b>Am-241</b>	2	0.06±1.15E-09	0.48±9.76E-18	<8.92E-18	2E-14

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

<sup>a</sup> Derived concentration guides (DCGs) are listed for reference only. They are applicable to average concentrations at the site boundary but not to stack concentrations, as might be inferred from their inclusion in this table.

<sup>b</sup> Total Uranium: 9.93±0.54E-03 g; average = 8.44±0.46E-11  $\mu\text{g}/\text{mL}$

**TABLE C-9**  
**2007 Ambient Airborne Radioactivity at Lag Storage (ANLAGAM)**

<i>Isotope</i>	<i>N</i>	<i>ANLAGAM</i> $\mu\text{Ci}/\text{mL}$		<i>N</i>	<i>AFGRVAL<sup>a</sup></i> $\mu\text{Ci}/\text{mL}$ <i>Background Range</i>	<i>DCG<sup>b</sup></i>
		<i>Average</i>	<i>Maximum</i>			
<b>Gross Alpha</b>	26	9.00±4.62E-16	1.27E-15	25	<3.84E-16-2.04E-15	--
<b>Gross Beta</b>	26	1.90±0.16E-14	2.82E-14	25	1.05E-14-2.94E-14	--
<b>K-40</b>	2	6.50±9.19E-16	1.30E-15	2	<2.04E-15-3.60E-15	9E-10
<b>Co-60</b>	2	3.57±4.50E-17	<4.74E-17	2	<1.36E-16-<1.63E-16	8E-11
<b>Sr-90</b>	2	-2.98±7.86E-17	<9.36E-17	2	<9.28E-17-<1.02E-16	9E-12
<b>Cs-137</b>	2	3.09±3.90E-17	<3.94E-17	2	<1.11E-16-<1.72E-16	4E-10
<b>Eu-154</b>	2	0.09±1.15E-16	<1.22E-16	2	<3.69E-16-<4.28E-16	5E-11
<b>U-232<sup>c</sup></b>	2	1.67±2.18E-17	8.85E-18	2	<1.26E-17-<3.04E-17	2E-14
<b>U-233/234<sup>c</sup></b>	2	2.98±1.35E-17	3.14E-17	2	4.45E-17-5.34E-17	9E-14
<b>U-235/236<sup>c</sup></b>	2	1.90±4.19E-18	7.09E-18	2	<1.33E-17-1.47E-17	1E-13
<b>U-238<sup>c</sup></b>	2	2.54±1.33E-17	3.35E-17	2	2.69E-17-2.70E-17	1E-13
<b>Pu-238</b>	2	0.77±4.01E-18	<4.97E-18	2	<6.65E-18-<1.11E-17	3E-14
<b>Pu-239/240</b>	2	1.88±7.59E-18	<9.63E-18	2	<8.36E-18-<8.81E-18	2E-14
<b>Am-241</b>	2	0.56±6.62E-18	<7.72E-18	2	<7.09E-18-<9.96E-18	2E-14

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

<sup>a</sup> Background air sampling location

<sup>b</sup> Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

<sup>c</sup> Total Uranium: ANLAGAM average = 5.64±0.31E-11  $\mu\text{g}/\text{mL}$ ; AFGRVAL average = 1.10±0.04E-10  $\mu\text{g}/\text{mL}$

**TABLE C-10**  
**2007 Ambient Airborne Radioactivity at Rock Springs Road (AFRSPRD)**

<i>Isotope</i>	<i>N</i>	<i>AFRSPRD</i> $\mu\text{Ci}/\text{mL}$		<i>N</i>	<i>AFGRVAL</i> <sup>a</sup> $\mu\text{Ci}/\text{mL}$	<i>DCG</i> <sup>b</sup>
		<i>Average</i>	<i>Maximum</i>			
<b>Gross Alpha</b>	26	$8.90 \pm 5.98 \times 10^{-16}$	$1.70 \times 10^{-15}$	25	$<3.84 \times 10^{-16}$ - $2.04 \times 10^{-15}$	--
<b>Gross Beta</b>	26	$2.05 \pm 0.22 \times 10^{-14}$	$3.21 \times 10^{-14}$	25	$1.05 \times 10^{-14}$ - $2.94 \times 10^{-14}$	--
<b>K-40</b>	2	$2.88 \pm 1.58 \times 10^{-15}$	$3.79 \times 10^{-15}$	2	$<2.04 \times 10^{-15}$ - $3.60 \times 10^{-15}$	$9 \times 10^{-10}$
<b>Co-60</b>	2	$-0.04 \pm 1.54 \times 10^{-16}$	$<2.07 \times 10^{-16}$	2	$<1.36 \times 10^{-16}$ - $<1.63 \times 10^{-16}$	$8 \times 10^{-11}$
<b>Sr-90</b>	2	$-0.63 \pm 1.29 \times 10^{-16}$	$<1.30 \times 10^{-16}$	2	$<9.28 \times 10^{-17}$ - $<1.02 \times 10^{-16}$	$9 \times 10^{-12}$
<b>I-129</b>	2	$0.00 \pm 4.13 \times 10^{-15}$	$<5.84 \times 10^{-15}$	2	$6.84 \times 10^{-17}$ - $6.84 \times 10^{-17}$	$7 \times 10^{-11}$
<b>Cs-137</b>	2	$-0.63 \pm 1.20 \times 10^{-16}$	$<1.60 \times 10^{-16}$	2	$<1.11 \times 10^{-16}$ - $<1.72 \times 10^{-16}$	$4 \times 10^{-10}$
<b>Eu-154</b>	2	$-0.41 \pm 4.42 \times 10^{-16}$	$<5.98 \times 10^{-16}$	2	$<3.69 \times 10^{-16}$ - $<4.28 \times 10^{-16}$	$5 \times 10^{-11}$
<b>U-232<sup>c</sup></b>	2	$0.65 \pm 1.20 \times 10^{-17}$	$<1.34 \times 10^{-17}$	2	$<1.26 \times 10^{-17}$ - $<3.04 \times 10^{-17}$	$2 \times 10^{-14}$
<b>U-233/234<sup>c</sup></b>	2	$4.10 \pm 1.93 \times 10^{-17}$	$4.59 \times 10^{-17}$	2	$4.45 \times 10^{-17}$ - $5.34 \times 10^{-17}$	$9 \times 10^{-14}$
<b>U-235/236<sup>c</sup></b>	2	$8.84 \pm 8.86 \times 10^{-18}$	$1.30 \times 10^{-17}$	2	$<1.33 \times 10^{-17}$ - $1.47 \times 10^{-17}$	$1 \times 10^{-13}$
<b>U-238<sup>c</sup></b>	2	$3.11 \pm 1.70 \times 10^{-17}$	$3.88 \times 10^{-17}$	2	$2.69 \times 10^{-17}$ - $2.70 \times 10^{-17}$	$1 \times 10^{-13}$
<b>Pu-238</b>	2	$1.58 \pm 6.65 \times 10^{-18}$	$<8.23 \times 10^{-18}$	2	$<6.65 \times 10^{-18}$ - $<1.11 \times 10^{-17}$	$3 \times 10^{-14}$
<b>Pu-239/240</b>	2	$0.24 \pm 1.07 \times 10^{-17}$	$<1.15 \times 10^{-17}$	2	$<8.36 \times 10^{-18}$ - $<8.81 \times 10^{-18}$	$2 \times 10^{-14}$
<b>Am-241</b>	2	$1.24 \pm 1.55 \times 10^{-17}$	$2.27 \times 10^{-17}$	2	$<7.09 \times 10^{-18}$ - $<9.96 \times 10^{-18}$	$2 \times 10^{-14}$

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

<sup>a</sup> Background air sampling location

<sup>b</sup> Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

<sup>c</sup> Total Uranium: AFRSPRD average =  $1.09 \pm 0.07 \times 10^{-10}$   $\mu\text{g}/\text{mL}$ ; AFGRVAL average =  $1.10 \pm 0.04 \times 10^{-10}$   $\mu\text{g}/\text{mL}$

**TABLE C-11**  
**2007 Ambient Airborne Radioactivity at Fox Valley Road (AFFXVRD)**

<i>Isotope</i>	<i>N</i>	<i>AFFXVRD</i> $\mu\text{Ci}/\text{mL}$		<i>N</i>	<i>AFGRVAL</i> <sup>a</sup> $\mu\text{Ci}/\text{mL}$	<i>DCG</i> <sup>b</sup>
		<i>Average</i>	<i>Maximum</i>			
<b>Gross Alpha</b>	26	$8.42 \pm 5.70 \times 10^{-16}$	$1.51 \times 10^{-15}$	25	$<3.84 \times 10^{-16}$ - $2.04 \times 10^{-15}$	--
<b>Gross Beta</b>	26	$1.94 \pm 0.21 \times 10^{-14}$	$2.85 \times 10^{-14}$	25	$1.05 \times 10^{-14}$ - $2.94 \times 10^{-14}$	--
<b>K-40</b>	2	$3.22 \pm 1.52 \times 10^{-15}$	$3.44 \times 10^{-15}$	2	$<2.04 \times 10^{-15}$ - $3.60 \times 10^{-15}$	$9 \times 10^{-10}$
<b>Co-60</b>	2	$-0.29 \pm 1.24 \times 10^{-16}$	$<1.64 \times 10^{-16}$	2	$<1.36 \times 10^{-16}$ - $<1.63 \times 10^{-16}$	$8 \times 10^{-11}$
<b>Sr-90</b>	2	$-0.49 \pm 1.16 \times 10^{-16}$	$<1.31 \times 10^{-16}$	2	$<9.28 \times 10^{-17}$ - $<1.02 \times 10^{-16}$	$9 \times 10^{-12}$
<b>Cs-137</b>	2	$0.07 \pm 8.46 \times 10^{-17}$	$<1.06 \times 10^{-16}$	2	$<1.11 \times 10^{-16}$ - $<1.72 \times 10^{-16}$	$4 \times 10^{-10}$

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

<sup>a</sup> Background air sampling location

<sup>b</sup> Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

**TABLE C-12**  
**2007 Ambient Airborne Radioactivity at Route 240 (AFRT240)**

<i>Isotope</i>	<i>N</i>	<i>AFRT240</i> <i>µCi/mL</i>		<i>N</i>	<i>AFGRVAL<sup>a</sup></i> <i>µCi/mL</i>	<i>DCG<sup>b</sup></i>
		<i>Average</i>	<i>Maximum</i>			
<b>Gross Alpha</b>	26	7.93±5.45E-16	1.39E-15	25	<3.84E-16-2.04E-15	--
<b>Gross Beta</b>	26	1.91±0.20E-14	2.79E-14	25	1.05E-14-2.94E-14	--
<b>K-40</b>	2	0.46±1.59E-15	2.20E-15	2	<2.04E-15-3.60E-15	9E-10
<b>Co-60</b>	2	0.35±1.23E-16	<1.65E-16	2	<1.36E-16-<1.63E-16	8E-11
<b>Sr-90</b>	2	-0.55±1.10E-16	<1.34E-16	2	<9.28E-17-<1.02E-16	9E-12
<b>Cs-137</b>	2	-0.09±1.10E-16	<1.48E-16	2	<1.11E-16-<1.72E-16	4E-10

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

<sup>a</sup> Background air sampling location

<sup>b</sup> Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

**TABLE C-13**  
**2007 Ambient Airborne Radioactivity at West Valley (AFWEVAL)**

<i>Isotope</i>	<i>N</i>	<i>AFWEVAL</i> <i>µCi/mL</i>		<i>N</i>	<i>AFGRVAL<sup>a</sup></i> <i>µCi/mL</i>	<i>DCG<sup>b</sup></i>
		<i>Average</i>	<i>Maximum</i>			
<b>Gross Alpha</b>	26	8.40±5.63E-16	1.47E-15	25	<3.84E-16-2.04E-15	--
<b>Gross Beta</b>	26	1.84±0.20E-14	2.93E-14	25	1.05E-14-2.94E-14	--
<b>K-40</b>	2	1.29±1.59E-15	1.81E-15	2	<2.04E-15-3.60E-15	9E-10
<b>Co-60</b>	2	0.54±1.56E-16	<1.78E-16	2	<1.36E-16-<1.63E-16	8E-11
<b>Sr-90</b>	2	0.86±1.14E-16	<1.19E-16	2	<9.28E-17-<1.02E-16	9E-12
<b>Cs-137</b>	2	-0.30±1.21E-16	<1.58E-16	2	<1.11E-16-<1.72E-16	4E-10

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

<sup>a</sup> Background air sampling location

<sup>b</sup> Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

**TABLE C-14**  
**2007 Ambient Airborne Radioactivity at Springville (AFSPRVL)**

<i>Isotope</i>	<i>N</i>	<i>AFSPRVL</i> <i>µCi/mL</i>		<i>N</i>	<i>AFGRVAL<sup>a</sup></i> <i>µCi/mL</i>	<i>DCG<sup>b</sup></i>
		<i>Average</i>	<i>Maximum</i>			
<b>Gross Alpha</b>	26	9.99±6.09E-16	1.45E-15	25	<3.84E-16-2.04E-15	--
<b>Gross Beta</b>	26	2.00±0.21E-14	3.00E-14	25	1.05E-14-2.94E-14	--
<b>K-40</b>	2	0.00±1.83E-15	<2.11E-15	2	<2.04E-15-3.60E-15	9E-10
<b>Co-60</b>	2	0.33±1.32E-16	<1.49E-16	2	<1.36E-16-<1.63E-16	8E-11
<b>Sr-90</b>	2	5.32±9.35E-17	1.03E-16	2	<9.28E-17-<1.02E-16	9E-12
<b>Cs-137</b>	2	-0.16±1.13E-16	<1.32E-16	2	<1.11E-16-<1.72E-16	4E-10

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

<sup>a</sup> Background air sampling location

<sup>b</sup> Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

**TABLE C-15**  
**2007 Radioactivity in Fallout: Rain Gauge (ANRGFOP)**

<b>Analyte</b>	<b>Units</b>	<b>N</b>	<b>Minimum</b>	<b>Average</b>	<b>Maximum</b>
Gross Alpha	nCi/m <sup>2</sup>	11	2.05E-02	8.13±1.48E-02	1.94E-01
Gross Beta	nCi/m <sup>2</sup>	11	9.18E-02	4.70±0.37E-01	9.51E-01
H-3	µCi/mL	11	1.06E-07	3.37±7.90E-08	1.47E-07
K-40	nCi/m <sup>2</sup>	11	<2.82E-01	1.11±7.47E+00	<1.53E+01
Cs-137	nCi/m <sup>2</sup>	11	<4.43E-02	0.68±5.89E-01	<1.24E+00

N - Number of samples